WHAT IS CLAIMED IS:

1. A method for detecting a smoke detector audible alarm comprising the steps of:

examining a first parameter of ambient sound for a period of time;

examining a second parameter of the ambient sound for the period of time;

comparing the first parameter and the second parameter to an expected pattern; and

declaring an audible alarm detection if both the first parameter and the second parameter match an expected pattern of the audible alarm.

2. The method of Claim 1, wherein the pattern varies temporally.

3. The method of Claim 1, wherein the ambient sound is sampled for a number of sample periods within the period of time.

4. The method of Claim 3, wherein the first parameter is a frequency of a peak amplitude in each of the sample periods.

5. The method of Claim 3, wherein the second parameter is a magnitude of a peak amplitude in each of the sample periods.

6. The method of Claim 3, further comprising the step of correlating the first parameter to the second parameter.

7. The method of Claim 6, wherein the correlating step is performed by determining when both the first parameter and the second parameter are at a value corresponding to an on portion of an audible alarm.

8. The method of Claim 7, wherein determining that the second parameter is at a value corresponding to an on portion of an audible alarm comprises the steps of

determining a maximum peak amplitude from among the magnitudes of the peak amplitudes in each of the sample periods;

determining an amplitude threshold based on the maximum peak amplitude; and

comparing each peak amplitude from each of the sample periods to the amplitude threshold.

9. The method of Claim 8, wherein the maximum peak amplitude is no less than a minimum amplitude above an average ambient noise level.

10. The method of Claim 1, further comprising the steps of

examining a single parameter of ambient noise to determine if there is a possibility that an audible alarm may be present; and

in the absence of a possibility that an audible alarm may be present, delaying a period of time and repeating the examining step;

wherein the steps of examining the first parameter and examining the second parameter are only performed if there is a possibility that an audible alarm may be present.

11. The method of Claim 1, further comprising the step of activating a tactile warning device when an audible alarm is detected.

12. The method of Claim 1, further comprising the step of sending an activation message to a remote device.

13. The method of Claim 12, wherein the remote device is a smoke detector configured to receive an activation message.

14. The method of Claim 12, wherein the remote device is a tactile alarm device.

15. The method of Claim 1, wherein the period of time corresponds to more than one full period of a temporally repeating period of the smoke detector audible alarm.

16. A device for detecting a smoke detector audible alarm comprising:

a microphone;

a processor connected to the microphone; and

a tactile alarm device connected to the processor;

wherein the processor is configured to perform the steps of

examining a first parameter of ambient sound for a period of time;

examining a second parameter of the ambient sound for the period of time;

comparing both the first parameter and the second parameter to an expected pattern; and

declaring an audible alarm detection if both the first parameter and the second parameter match an expected pattern of the audible alarm.

17. The device of Claim 16, wherein the pattern varies temporally.

18. The device of Claim 16, wherein the ambient sound is sampled for a number of sample periods within the period of time.

19. The device of Claim 18, wherein the first parameter is a frequency of a peak amplitude in each of the sample periods.

20. The device of Claim 18, wherein the second parameter is a magnitude of a peak amplitude in each of the sample periods.

21. The device of Claim 18, wherein the processor is further configured to perform the step of correlating the first parameter to the second parameter.

22. The device of Claim 21, wherein the correlating step is performed by determining when both the first parameter and the second parameter are at a value corresponding to an on portion of an audible alarm.

23. The device of Claim 22, wherein the processor is configured to perform the step of determining that the second parameter is at a value corresponding to an on portion of an audible alarm by performing the steps of

determining a maximum peak amplitude from among the magnitudes of the peak amplitudes in each of the sample periods;

determining an amplitude threshold based on the maximum peak amplitude; and

comparing each peak amplitude from each of the sample periods to the amplitude threshold.

24. The device of Claim 23, wherein the maximum peak amplitude is no less than a minimum amplitude above an average ambient noise level.

25. The device of Claim 16, wherein the processor is further configured to perform the steps of

examining a single parameter of ambient noise to determine if there is a possibility that an audible alarm may be present; and

in the absence of a possibility that an audible alarm may be present, delaying a period of time and repeating the examining step;

wherein the steps of examining the first parameter and examining the second parameter are only performed if there is a possibility that an audible alarm may be present.

26. The device of Claim 16, further comprising a tactile warning device connected to the processor, the processor being further configured to activate the warning device when an audible alarm detection is declared.

27. The device of Claim 16, wherein the processor is further configured to perform the step of sending an activation message to a remote device via a transceiver connected to the processor.

28. The device of Claim 27, wherein the remote device is a smoke detector configured to receive an activation message.

29. The device of Claim 27, wherein the remote device is a tactile alarm device.

30. A smoke detector comprising:

a smoke detection circuit;

a microphone;

an alarm device;

a transmitter; and

a processor connected to the microphone, the alarm device, and the

transceiver, the processor being configured to perform the steps of

receiving an indication from the smoke detection circuit that a fire

5   has occurred;

analyzing ambient sound from the microphone to detect an audible

alarm from another smoke detector; and

activating the alarm device and transmitting an activation message

to a remote alarm device upon receipt of either an indication that a fire has

10   occurred from the smoke detection circuit or a detection of an audible alarm from

another detector.

31. The smoke detector of Claim 30, wherein the remote alarm device is a

tactile alarm.

32. The smoke detector of Claim 30, wherein the remote alarm device is a

15   third device configured to activate an audible alarm upon receipt of the activation

message.

33. The smoke detector of Claim 30, further comprising a receiver

connected to the processor, wherein the receiver is further configured to perform

the activating step upon receipt of an activation message via the receiver.

20   34. The smoke detector of Claim 30, wherein the alarm device is an

audible alarm.